



101 Critical Days of Summer

Safety Tip #14 – Scuba Diving



Scuba diving is an adventure sport, which requires skill and a lot of confidence. You should be trained thoroughly and be prepared, both physically and mentally, to spend time under water. Apart from these, you need to take all the safety precautions to ensure a pleasurable experience, every time you dive into the deep sea. When it comes to scuba diving, safety is prioritized because you may encounter a problem at any time during the dive.

Several scuba-certifying agencies offer training for divers, from beginners to experts. Three agencies that offer certification courses are the Professional Association of Diving Instructors (PADI), the National Association of Underwater Instructors (NAUI) and Scuba Schools International (SSI). Basic courses involve classroom instruction, training pools and open-water settings. Diving certification, which allows you to rent equipment, request tanks to be re-filled and dive without supervision, can be attained in as little as five open-water dives.

What are the most common problems of scuba diving?

The most common medical problems are simple middle ear “squeezes.” Squeezes cause pain in your ears. The pain is caused by the difference in pressure between the air spaces of your ears and mask and higher water pressure as you go deeper into the water. Squeezes that affect the inner ear or sinuses are less common.

Cuts, scrapes and other injuries to the arms and legs can be caused by contact with fish and other marine animals, certain species of coral and hazards such as exposed sharp metal on wrecks or fishing line.

What dangerous medical conditions are possible when you are diving?

- Inner ear barotrauma – This condition may occur if you have trouble clearing (equalizing the pressure between the middle ear and the water – sometimes called “popping your ears”) during a dive. The result is severe dizziness and hearing loss.
- Pulmonary barotrauma – This condition is the result of improper breathing during the ascent to the surface or, occasionally, from diving with a respiratory tract infection. Symptoms include chest pain, shortness of breath and hoarseness.
- Arterial gas embolism (AGE) – This is a type of barotraumas in which bubbles enter the blood stream and travel to the brain. Symptoms such as numbness or tingling of the skin, weakness, paralysis or loss of consciousness may occur. This is a serious diving injury.
- Decompression sickness (“the bends”) – This condition occurs during ascent and on the surface of the water. Nitrogen gas that is stored in body tissues and blood comes out of solution and forms bubbles in the blood. The bubbles can injure various body tissues and block blood vessels. The most common signs of severe decompression sickness are dysfunction of the spinal cord, brain and lungs.

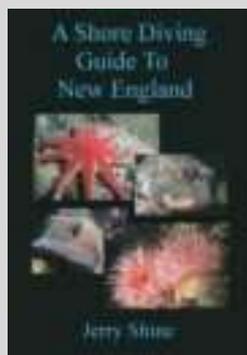
Remember: If you should develop any of the symptoms on this list during or after a dive, seek medical care immediately.





Most severe dive-related injuries and deaths happen in beginning divers. To be safe, always dive within the limits of your experience and level of training. Good rules to follow for safe diving include:

1. **Never try a dive you're not comfortable with.** During descent, you should gently equalize your ears and mask. At depth, never dive outside the parameters of the dive tables or your dive computer (information that helps you avoid decompression sickness).
2. **Be in good physical shape** – You don't have to be a triathlete but you should be able to swim and take the stress of diving. A physical exam is a good idea before diving. Some studies have shown that about a quarter to a third of all scuba diving fatalities are from heart and/or circulatory problems.
3. **Never hold your breath while ascending.** Don't take short shallow breaths. You should always ascend slowly while breathing normally.
4. Become familiar with the underwater area and its dangers. Learn which fish, coral and other hazards to avoid so injuries do not occur. Be aware of local tides and currents; check the intensity of the underwater current as well.
5. **Never panic under water.** If you become confused or afraid during a dive, stop, try to relax and think the problem through. You can also get help from your dive buddy or dive master.
6. **Banish Fear** - The majority of scuba accidents occur due to the fear within the person performing the dive. Banish all your fears before attempting the scuba dive. Apart from the safety measures, confidence is highly needed to perform well in scuba diving.
7. **Never dive without a buddy.**
8. **Always plan your dive; then always dive your plan.**
9. Be sure that your diving equipment can handle the dive you have planned and that the equipment is working well. You don't want to find out the scuba regulator doesn't work once you are underwater. Checking equipment is especially important if you are renting. If you own your regulator and haven't dove in a while, it should also be serviced to make sure it is working properly. Do a check of the regulator hoses also.
10. **Relax** – Being relaxed and comfortable underwater is key to a successful dive. If something happens, stop, breathe, think and act. Do not panic and rush to the surface (it's easier said than done). But observing this scuba diving safety rule could be key to a safe dive.
11. **Don't drink alcohol before diving.**
12. Never dive while taking medicine unless your doctor tells you it's safe.
13. Diving can be dangerous if you have certain medical problems. Ask your doctor how diving may affect your health.
14. Cave diving is dangerous and should only be attempted by divers with proper training and equipment.
15. If you don't feel good or if you are in pain after diving, go to the nearest emergency room immediately.
16. Don't fly for 12 hours after a no-decompression dive, even in a pressurized airplane. If your dive required decompression stops, don't fly for at least 24 hours.



Be Safe Down Under – Your Risk Management Staff

This document was derived from multiple sources. Sources are available upon request in the 157 ARW/SE Office.